LIGHTING SYSTEM

- 1. General Description
- 2. Relay and Fuse
- 3. Headlight System
- 4. High Beam Assist System
- 5. Day Time Running Light System
- 6. Clearance Light and Illumination Light System
- 7. Turn Signal Light and Hazard Light System
- 8. Back-up Light System
- 9. Stop Light System
- 10. Interior Light System
- 11. Auto Headlight Beam Leveler System
- 12. Light Control Sensor
- 13. Combination Switch (Light)
- 14. Headlight Assembly
- 15. Front Turn Signal Light Bulb
- 16. Hazard Switch
- 17. Front Side Marker Light Assembly
- 18. Rear Combination Light Assembly
- 19. Back-up Light Assembly
- 20. Back-up Light Bulb
- 21. License Plate Light
- 22. High-mounted Stop Light
- 23. Spot Map Light
- 24. Trunk Room Light
- 25. Vanity Mirror Light
- 26. Auto Headlight Beam Leveler Control Module
- 27. Reflex Reflector
- 28. Door Step Light
- 29. Door Switch

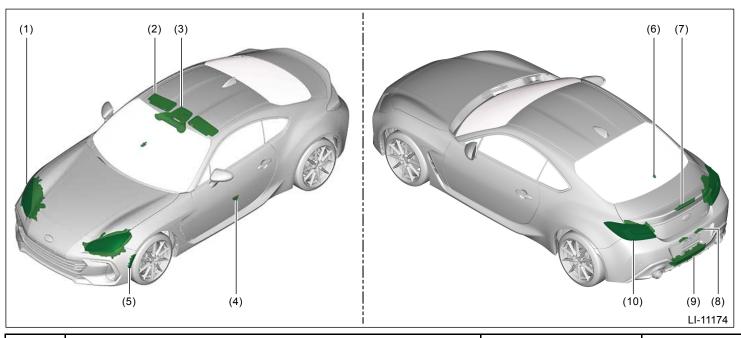
LIGHTING SYSTEM > General Description

CAUTION

- When performing service operation, refer to "Repair Contents" in "General Description". Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
 - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor.
 Ref. to REPAIR CONTENTS > NOTE > BATTERY.
 - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
 - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. Ref. to AIRBAG SYSTEM Section.
- Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.
- Always replace with a bulb that is the same model and wattage as those of the old one.

LIGHTING SYSTEM > General Description

SPECIFICATION



No.	Description		Capacity and wattage	Туре
		Low beam / high beam	12 V — 20/25 W (LED)	*
(1) Headlight	Front turn signal light	12 V — 6 W (LED)	LY5B	
		Parking light / daytime running light	12 V — 0.9/10 W (LED)	*

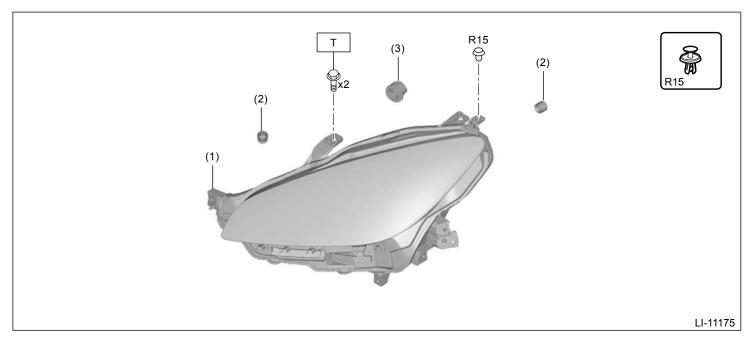
(2)	Vanity mirror light		12 V — 2 W	*
(3)	Spot map light		12 V — 8 W	*
(4)	Door step light		12 V — 5 W	W5W
(5)	Front side marker lights		13.5 V — 1.4 W (LED)	*
(6)	Trunk room light		12 V — 3.8 W	T10
(7)	High-mounted stop light		13.5 V — 1.5 W (LED)	*
(8)	License plate light		13.5 V — 0.4 W (LED)	*
(9)	Back-up light		12 V — 16 W	W16W
		Tail light	12 V — 0.7 W (LED)	*
(10) Rear combina	Door combination light	Stop light	12 V — 2.2 W (LED)	*
	Rear combination light	Rear turn signal light	12 V — 5.1 W (LED)	*
		Rear side marker light	12 V — 0.5 W (LED)	*

^{*:} Non-disassembly type

LIGHTING SYSTEM > General Description

COMPONENT

1. HEADLIGHT



(1) Light ASSY head

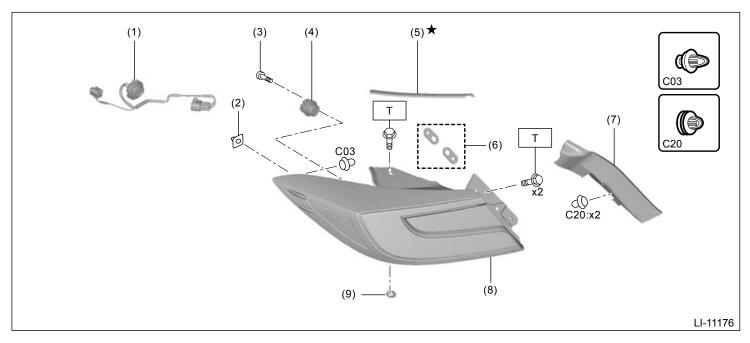
(3) LED module

Tightening torque: N⋅m (kgf-m, ft-lb)

(2) Cap

T: 7.5 (0.8, 5.5)

2. REAR COMBINATION LIGHT



- (1) Cord ASSY
- (2) Grommet
- (3) TORX® screw
- (4) LED module
- (5) End rubber

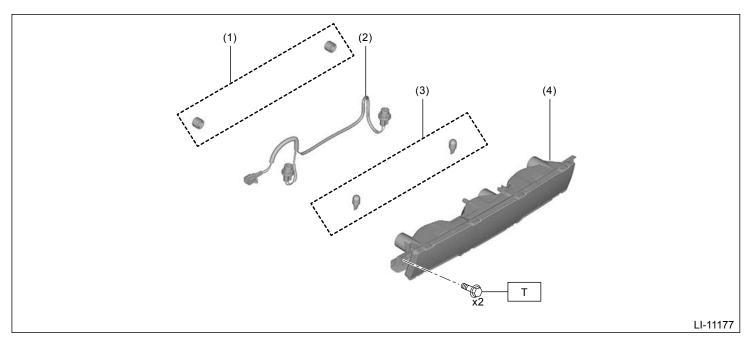
(6) Gasket

- Tightening torque: N·m (kgf-m, ft-lb)
- (7) Cover ASSY rear combination
- (8) Light ASSY rear combination

T: 7.5 (0.8, 5.5)

(9) Gasket

3. BACK-UP LIGHT



(1) Cap

(3) Bulb

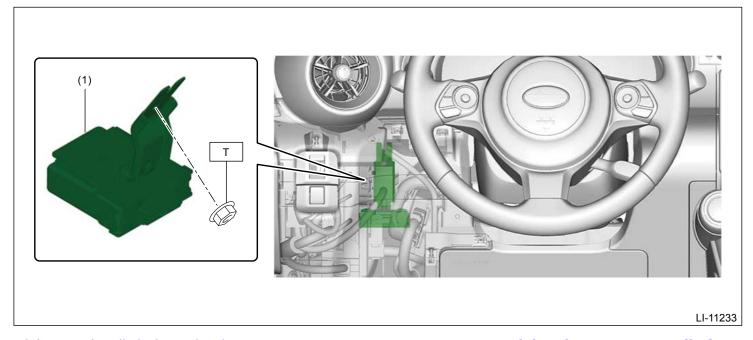
Tightening torque: N·m (kgf-m, ft-lb)

(2) Cord ASSY

(4) Light ASSY back-up

T: 7.5 (0.8, 5.5)

4. AUTO HEADLIGHT BEAM LEVELER CONTROL MODULE



(1) Auto headlight beam leveler CM

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

LIGHTING SYSTEM > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	09843-18040	DIAGNOSIS CHECK WIRE	Used for the initialization of the auto headlight beam leveler system.
ST0984318040			
	_	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system.
SSM STSSM4			 For detailed operation procedures, refer to "Help" of application. Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).

2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
TORX [®] T20	Used for removing and installing the stop light of the rear combination light.

LIGHTING SYSTEM > Relay and Fuse

LOCATION

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay>LOCATION.

Note:

For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit>WIRING DIAGRAM.

LIGHTING SYSTEM > Relay and Fuse

INSPECTION

1. CHECK FUSE

- 1. Remove the fuse and inspect visually.
- 2. If the fuse is blown out, replace the fuse.

Note:

If the fuse is blown again, check the system wiring harness.

2. CHECK RELAY

1. Measure the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	1 2 3 4 LI-01273

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 M Ω or more	
1 — 4	Always	Less than 1 Ω	

1 — 2	Apply battery voltage between terminals 3 and 5.	Less than 1 Ω	1 2 3 4 5 SL-01566
			3L-01300

2. Replace the relay if the inspection result is not within the standard value.

LIGHTING SYSTEM > Headlight System

WIRING DIAGRAM

For the wiring diagram, refer to "Headlight System" in the wiring diagram.

Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.

LIGHTING SYSTEM > Headlight System

INSPECTION

1. BASIC INSPECTION

For inspection, refer to "Basic Diagnostic Procedure" of "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)" section.

Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)" section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" of "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)" section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Control Module I/O Signal.

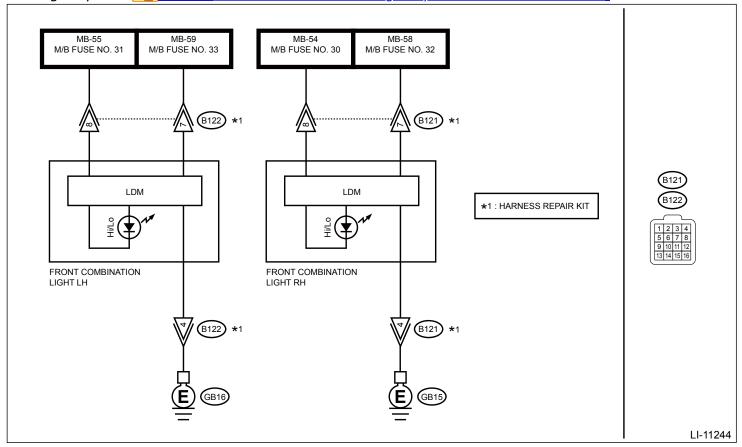
4. TROUBLE SYMPTOM

Symptoms	Reference
Headlight does not illuminate, or headlight is weak.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK HEADLIGHT SYSTEM.
Light does not illuminate though the surrounding is dark, or it remains illuminating though the surrounding becomes brighter. (Everything except auto headlight operates normally.)	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > AUTO HEADLIGHT SYSTEM CHECK.
Welcome lighting does not illuminate.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT ILLUMINATE).
Welcome lighting does not go off.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT GO OFF).
The wiper interlocked headlight does not operate.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK WIPER INTERLOCK HEADLIGHT SYSTEM.

5. CHECK HEADLIGHT SYSTEM

Wiring diagram:

Headlight system Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.



1. CHECK HEADLIGHT ILLUMINATION.



- 1. Turn the ignition switch to ON.
- **2.** Turn the lighting switch to the switch TAIL position.
- **3.** Turn the lighting switch to the switch HEAD position.
- **4.** Turn the dimmer & passing switch to the switch UP position.

Do the parking light and headlight (low beam and high beam) come on?



The headlight system is normal.



Go to 2.

2. CHECK DTC.



Read the DTC of [Body Control] using the Subaru Select Monitor.

[DIAGNOSTICS] > Diagnostic Trouble Code (DTC).

Is DTC displayed?



Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.



Go to 3.

3. CHECK POWER SUPPLY.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [BATT voltage (control)]
- [BATT voltage (BACKUP)]
- [IGN voltage]

Is the voltage 9 - 16 V?



60 to 4.



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

4. CHECK CURRENT DATA.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Lighting II Switch Input]
- [Dimmer Hi Switch Input]

Does the display change between [OFF] \longleftrightarrow [ON] when the lighting switch is moved to the switch HEAD and switch UP positions?







Check the combination switch or harness for open circuit.

5. CHECK CURRENT DATA.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Lighting II Lamp Output]
- [Lighting Hi Lamp Output]

Does the display change to [ON] when turning the lighting switch to the switch HEAD position and switch UP position?







Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

6. CHECK HARNESS.



- 1. Turn the ignition switch to OFF.
- 2. Disconnect the headlight connector.
- **3.** Check the harness between the headlight connector and the chassis ground.

Connector & terminal

Headlight RH

(B121) No. 4 — Chassis ground:

Headlight LH

(B122) No. 4 — Chassis ground:

Is the resistance less than 10 Ω ?



Check the headlight assembly connector for temporary poor contact.

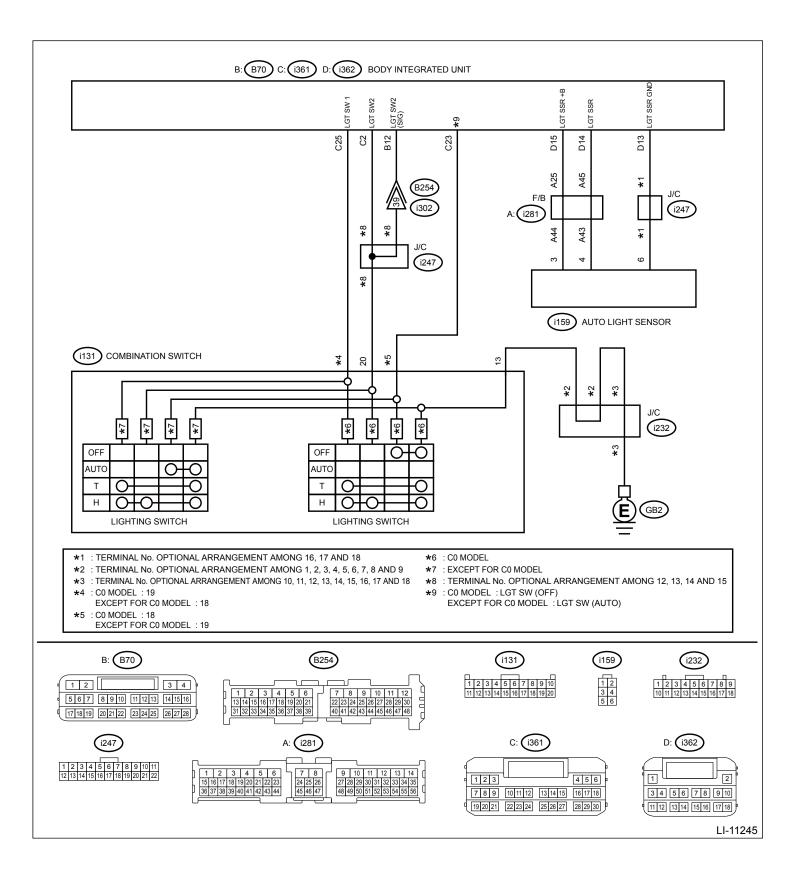


Repair or replace the defective part.

6. AUTO HEADLIGHT SYSTEM CHECK

Wiring diagram:

Headlight system <a> Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.



1. CHECK HEADLIGHT AND TAIL LIGHT ILLUMINATION.



- 1. Turn the ignition switch to ON.
- 2. Make the light control sensor vicinity dark.
- Do the parking light, headlight, and tail light illuminate when the lighting switch is moved to the AUTO position?
- Do the parking light, headlight, and tail light go off when approximately 15 seconds have elapsed since the area around the light control sensor is made bright while the lighting switch is at the AUTO position?



The auto headlight system is normal.



Go to 2.

2. CHECK BODY INTEGRATED UNIT SETTING.



Using Subaru Select Monitor, display data of [Illumination Sensor Setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [Support]?







Turn the setting to [Support].

3. CHECK DTC.



Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

- [Body Control]
- [Combination meter]
- [Brake Control]
- [Automatic Light and Wiper]

Is DTC displayed?



Perform the diagnosis for the displayed DTCs.





4. CHECK BODY INTEGRATED UNIT SETTING.



Using Subaru Select Monitor, display data of [Auto Light Sensitivity Adjustment] in [Customize] of [Body Control].

Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [OFF]?



60 to 5.



Turn the setting to [OFF], @ Go to 5.

5. CHECK CURRENT DATA.



- 1. Using Subaru Select Monitor, display data of [Illumination Rate Info] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
- 2. Measure the values when the brightness around the light control sensor is changed.
 - When the light control sensor is covered with cloth, etc. to make the vicinity dark.
 - When the light control sensor is exposed to sunlight or made close to intense light such as incandescent light to 300 mm (11.81 in) or less to make the vicinity bright.

Illumination sensor output

Dark condition: 003E or more Bright condition: 003C or less

Note:

The output value is displayed in hexadecimal format.

Is the value output according to the brightness?

Yes

60 to 7.

Note:

If you changed the [Auto Light Sensitivity Adjustment] setting in step 4, change it back to the initial value.

No

60 to 6.

Note:

If you changed the [Auto Light Sensitivity Adjustment] setting in step 4, change it back to the initial value.

6. CHECK HARNESS.



- 1. Turn the ignition switch to OFF.
- 2. Disconnect the connectors from body integrated unit and light control sensor.
- 3. Check the harness between body integrated unit and light control sensor.

Connector & terminal

```
(i362) No. 15 — (i159) No. 3:
(i362) No. 14 — (i159) No. 4:
(i362) No. 13 — (i159) No. 6:
```

Is harness normal?

Yes

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

7. CHECK CURRENT DATA (BODY INTEGRATED UNIT).



- **1.** Turn the ignition switch to ON.
- **2.** Set the lighting switch to AUTO position.
- 3. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
 - Other than for C0
 - [Writing AUTO SW input]
 - For C0
 - [Lighting I Switch Input]
 - [Lighting II Switch Input]
- Is [Writing AUTO SW input] set to [ON]? (Except for CO)
- Are [Lighting I Switch Input] and [Lighting II Switch Input] set to [OFF]? (For C0)

Yes

Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Go to 8.

8. CHECK COMBINATION SWITCH (LIGHT).



- 1. Turn the ignition switch to OFF.
- **2.** Check the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

Is the combination switch (light) normal?



Go to 9.



Replace the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light).

9. CHECK HARNESS.



- 1. Disconnect the connectors of body integrated unit and combination switch (light).
- 2. Check the harness between body integrated unit and combination switch (light).

Connector & terminal

Other than for CO

```
(i361) No. 25 — (i131) No. 18:
(i361) No. 2 — (i131) No. 20:
(B70) No. 12 — (i131) No. 20:
(i361) No. 23 — (i131) No. 19:
```

For CO

```
(i361) No. 25 — (i131) No. 19:
(i361) No. 2 — (i131) No. 20:
(B70) No. 12 — (i131) No. 20:
(i361) No. 23 — (i131) No. 18:
```

Is harness normal?



Go to 10.



Repair or replace the defective part.

10. CHECK HARNESS.



Check the harness between the combination switch (light) connector and the chassis ground.

Connector & terminal

(i131) No. 13 - Chassis ground:

Is the resistance less than 10 Ω ?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

7. CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT ILLUMINATE)

1. CHECK BODY INTEGRATED UNIT SETTING.



- **1.** Turn the ignition switch to ON.
- 2. Using Subaru Select Monitor, display the data of [Welcome Light Off Delay Time(Approaching)] or [Welcome Light Off Delay Time(Exiting)] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting other than [OFF]?





No

Turn the setting to other than [OFF].

2. CHECK BODY INTEGRATED UNIT SETTING.



Using Subaru Select Monitor, display data of [Illumination Sensor Setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [ON]?



Go to 3.

No

Turn the setting to [ON].

3. CHECK AUTO HEADLIGHT.



- **1.** Set the lighting switch to AUTO position.
- 2. Make the light control sensor vicinity dark.
- **3.** Turn the ignition switch to ON.

Do the parking light, tail light and headlight illuminate?



60 to 4.



Check the auto headlight system. Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > AUTO HEADLIGHT SYSTEM CHECK.

4. CHECK DOOR LOCK.



Operate the door lock using the access key.

Do the lock and unlock operate properly?



Go to 5.



Check the keyless access with push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

5. CHECK BODY INTEGRATED UNIT.



- 1. Turn the ignition switch to ON.
- 2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
 - [IGN voltage]
 - [BATT voltage (BACKUP)]

Is the voltage 10 - 15 V?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

8. CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT GO OFF)

1. CHECK BODY INTEGRATED UNIT SETTING.



- **1.** Turn the ignition switch to ON.
- 2. Using Subaru Select Monitor, display the data of [Welcome Light Off Delay Time(Approaching)] or [Welcome Light Off Delay Time(Exiting)] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the illumination time setting correct?



Go to 2.



Set the illumination time.

2. CHECK THE LIGHTS.



Check if the lights illuminate or go out.

- Does the headlight illuminate when the lighting switch is moved to the switch HEAD position?
- Do the parking light, tail light, and headlight go out when the lighting switch is moved to the switch OFF position?



Go to 3.



Check the combination switch (light) and each light circuit.

3. CHECK BODY INTEGRATED UNIT.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [IGN voltage]
- [BATT voltage (BACKUP)]

Is the voltage 10 - 15 V?



60 to 4.

No

Repair or replace the defective part.

4. CHECK BODY INTEGRATED UNIT.



Using Subaru Select Monitor, display [Driver's door SW input] in [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] \longleftrightarrow [ON] when driver's door is opened/closed?



@ Go to 5.



Check the door switch. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.

5. CHECK DOOR LOCK.



Operate the door lock using the access key.

Do the lock and unlock operate properly?



Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.



Check the keyless access with push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

9. CHECK WIPER INTERLOCK HEADLIGHT SYSTEM

1. AUTO HEADLIGHT SYSTEM CHECK.



Check the operation of auto headlight system.

Is the system normal?



Go to 2.



Check and repair the auto headlight system. Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > AUTO HEADLIGHT SYSTEM CHECK.

2. CHECK WIPER SYSTEM OPERATION.



Check the operation of the wiper system.

Is the system normal?



Go to 3.



Check and repair the wiper system. Ref. to WIPER AND WASHER SYSTEMS>Wiper and Washer System>INSPECTION.

3. CHECK BODY INTEGRATED UNIT SETTING.



- 1. Turn the ignition switch to ON.
- **2.** Using Subaru Select Monitor, display data of [Wiper Link Auto Light Setup] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [ON]?



@ Go to 4.

No

Turn the setting to [ON].

4. CHECK BODY INTEGRATED UNIT.



Using Subaru Select Monitor, display data of [Fr wiper input] in [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] \longleftrightarrow [ON] when the combination switch (wiper) is operated between INT/LO/HI \longleftrightarrow OFF?



The wiper interlock headlight system is normal.



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body
 Integrated Unit.

10. CHECK STEERING RESPONSIVE HEADLIGHT SYSTEM

For inspection procedures in the steering responsive headlight system, refer to "Basic Diagnostic Procedure" of "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)" section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Basic Diagnostic Procedure.

11. CHECK HIGH BEAM ASSIST SYSTEM

For inspection procedures in the high beam assist system, refer to "High Beam Assist System". Ref. to LIGHTING SYSTEM>High Beam Assist System>INSPECTION.

12. CHECK LIGHTING SWITCH

For the lighting switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

13. CHECK DIMMER & PASSING SWITCH

For the dimmer & passing switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

LIGHTING SYSTEM > Headlight System

NOTE

For operation procedures of components of the headlight system, refer to the following sections.

- Headlight assembly: <a>Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Light control sensor: Ref. to LIGHTING SYSTEM>Light Control Sensor.

LIGHTING SYSTEM > High Beam Assist System

WIRING DIAGRAM

For the wiring diagram, refer to "Headlight System" in the wiring diagram.

Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.

LIGHTING SYSTEM > High Beam Assist System

INSPECTION

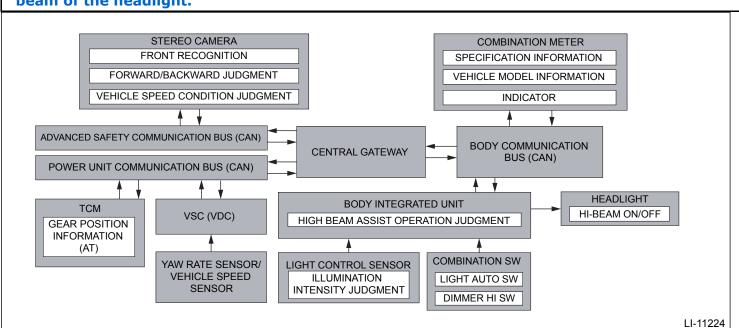
1. BASIC INSPECTION

For inspection, refer to the "BODY CONTROL SYSTEM (DIAGNOSTICS)" section. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostics with Phenomenon.

2. SYSTEM BLOCK DIAGRAM

Note:

The high beam assist system uses the stereo cameras of the EyeSight system to recognize the conditions in front of the vehicle, and automatically switches the high beam and low beam of the headlight.



LIGHTING SYSTEM > Day Time Running Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Daytime Running Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Daytime Running Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Day Time Running Light System

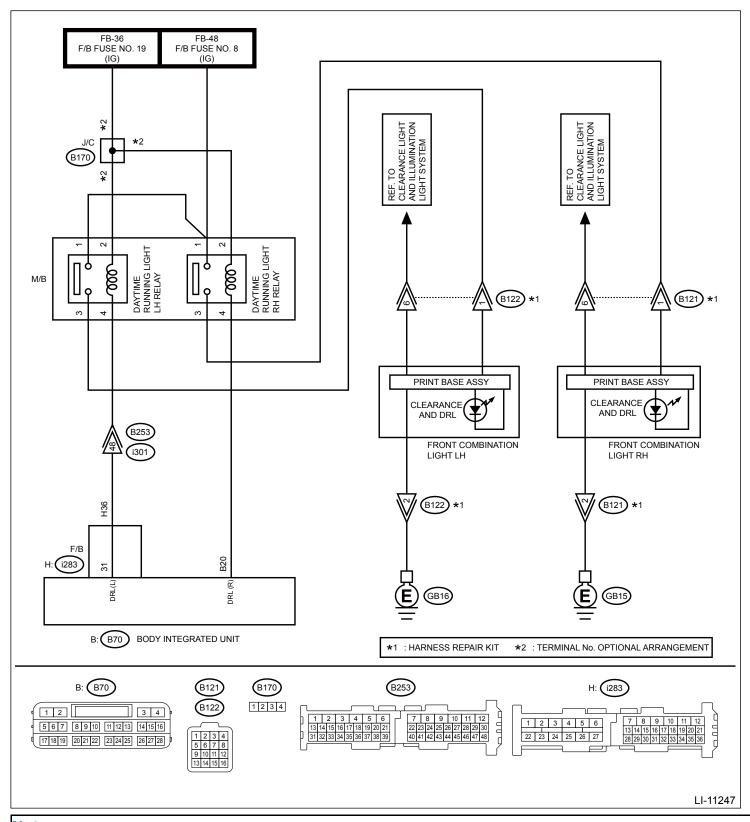
INSPECTION

1. TROUBLE SYMPTOM

Daytime running light does not illuminate.

Wiring diagram:

Daytime running light system Ref. to WIRING SYSTEM>Daytime Running Light System>WIRING DIAGRAM.



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK FUSE.



- 1. Turn the ignition switch to OFF.
- 2. Check the fuse on the upstream of the daytime running light relay.

Is the fuse OK?



@ Go to 2.



Replace the fuse.

2. CHECK RELAY.



Check the daytime running light relay. <a>Ref. to LIGHTING SYSTEM>Relay and Fuse>INSPECTION.

Is the relay OK?



@ Go to 3.



Replace the relay.

3. CHECK DTC.



- **1.** Turn the ignition switch to ON.
- 2. Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?



Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.



Go to 4.

4. CHECK CURRENT DATA.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Parking Brake Switch Input]
- [Shift Position]
- [Lighting II Switch Input]
- [P SW]
- [IGN voltage]

Is the input signal normal?







Check the defective part.

5. CHECK CURRENT DATA.



- **1.** Start the engine.
- 2. Release the parking brake and place the shift position to other than "P" range.
- 3. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
 - [Daytime Running Light Alternate System (R)Output]
 - [Daytime Running Light Alternate System (L)Output]

Does the display switch between [OFF] \longleftrightarrow [ON] when the lighting switch is switched from the OFF position to the HEAD position?



Go to 6.



Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

6. CHECK DAYTIME RUNNING LIGHT ILLUMINATION.



- 1. Turn the ignition switch to OFF.
- Disconnect the headlight connector.
- 3. Apply battery voltage to the DRL terminal input of the headlight unit.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side. Incorrect polarity connection may cause internal LED damage.

Connector & terminal

```
Daytime running light RH
(B121) No. 1 (+) — (B121) No. 2 (-):

Daytime running light LH
(B122) No. 1 (+) — (B122) No. 2 (-):
```

Does the daytime running light illuminate?



6 Go to 7.



Replace the headlight. Ref. to LIGHTING SYSTEM>Headlight Assembly.

7. CHECK HARNESS.



- 1. Disconnect the connectors of body integrated unit, daytime running light relay and headlight.
- 2. Check each harness.

Connector & terminal

Daytime running light RH

```
(B121) No. 1 — Daytime running light relay RH No. 3: (B70) No. 20 — Daytime running light relay RH No. 4:
```

Daytime running light LH

```
(B122) No. 1 — Daytime running light relay LH No. 3: (i283) No. 36 — Daytime running light relay LH No. 4:
```

Is harness normal?



Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.



Repair or replace the defective part.

LIGHTING SYSTEM > Day Time Running Light System

NOTE

For operation procedures of components of the daytime running light system, refer to the following sections.

- Headlight assembly: <a>Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

LIGHTING SYSTEM > Clearance Light and Illumination Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Clearance Light and Illumination Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Clearance Light and Illumination Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Clearance Light and Illumination Light System

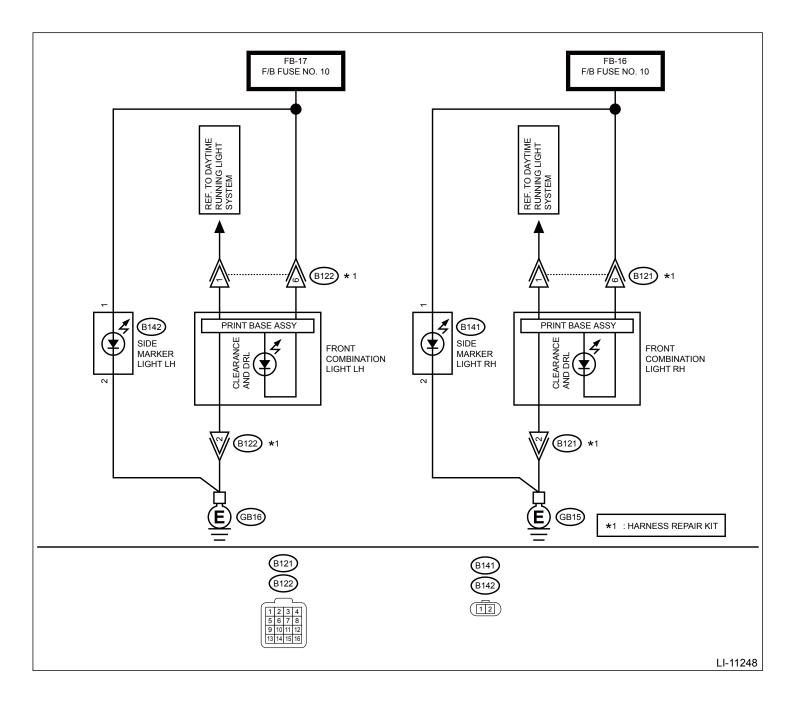
INSPECTION

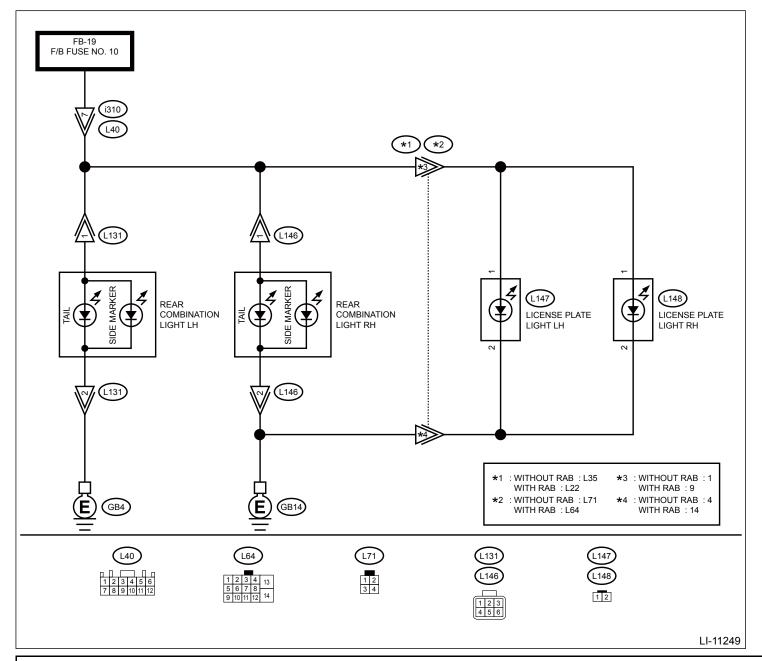
1. TROUBLE SYMPTOM

Parking light and tail light do not illuminate or lights are weak

Wiring diagram:

Clearance light and illumination light system Ref. to WIRING SYSTEM>Clearance Light and Illumination Light System>WIRING DIAGRAM.





Note:

Perform unit inspection of the combination switch (light) and illumination light to check that there are no problems.

1. CHECK ILLUMINATION LIGHT SYSTEM.



- 1. Turn the ignition switch to ON.
- **2.** Turn the lighting switch to the switch HEAD position.

Does the illumination light come on?



Illumination light is normal.



@ Go to 2.

2. CHECK FUSE.



- **1.** Turn the ignition switch to OFF.
- **2.** Check the fuse upstream. Ref. to LIGHTING SYSTEM>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the check result OK?



Go to 3.



Replace the fuse.



- **1.** Disconnect the connector of the light which did not illuminate.
- 2. Check the harness between the F/B fuse and each light.

Connector & terminal

Headlight RH

F/B fuse No. 10 (downstream side) — (B121) No. 6:

Headlight LH

F/B fuse No. 10 (downstream side) — (B122) No. 6:

Front side marker light RH

F/B fuse No. 10 (downstream side) - (B141) No. 1:

Front side marker light LH

F/B fuse No. 10 (downstream side) — (B142) No. 1:

Rear combination light RH

F/B fuse No. 10 (downstream side) — (L146) No. 1:

Rear combination light LH

F/B fuse No. 10 (downstream side) — (L131) No. 1:

License plate light RH

F/B fuse No. 10 (downstream side) — (L148) No. 1:

License plate light LH

F/B fuse No. 10 (downstream side) — (L147) No. 1:

Is harness normal?



Go to 4.



4. CHECK THE LIGHTS.



Apply battery voltage between light connector terminals.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side. Incorrect polarity connection may cause internal LED damage.

```
Connector & terminal
  Headlight RH
    (B121) No. 6 (+) — (B121) No. 2 (-):
  Headlight LH
    (B122) No. 6 (+) - (B122) No. 2 (-):
  Front side marker light RH
    (B141) No. 1 (+) — (B141) No. 2 (-):
  Front side marker light LH
    (B142) \text{ No. } 1 (+) - (B142) \text{ No. } 2 (-):
  Rear combination light RH
    (L146) No. 1 (+) — (L146) No. 2 (-):
  Rear combination light LH
    (L131) No. 1 (+) — (L131) No. 2 (-):
  License plate light RH
    (L148) No. 1 (+) — (L148) No. 2 (-):
  License plate light LH
    (L147) No. 1 (+) — (L147) No. 2 (-):
```

Does it illuminate?









Check the harness between each light connector and the chassis ground.

Connector & terminal

Headlight RH

(B121) No. 2 — Chassis ground:

Headlight LH

(B122) No. 2 — Chassis ground:

Front side marker light RH

(B141) No. 2 — Chassis ground:

Front side marker light LH

(B142) No. 2 — Chassis ground:

Rear combination light RH

(L146) No. 2 — Chassis ground:

Rear combination light LH

(L131) No. 2 — Chassis ground:

License plate light RH

(L148) No. 2 — Chassis ground:

License plate light LH

(L147) No. 2 — Chassis ground:

Is the resistance less than 10 Ω ?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

2. CHECK LIGHTING SWITCH

For the lighting switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

LIGHTING SYSTEM > Clearance Light and Illumination Light System

NOTE

For operation procedures of components of the clearance light and illumination light system, refer to the following sections.

• Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.

- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Front side marker light assembly: Ref. to LIGHTING SYSTEM>Front Side Marker Light Assembly.
- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- License plate light: Ref. to LIGHTING SYSTEM>License Plate Light.

LIGHTING SYSTEM > Turn Signal Light and Hazard Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Turn Signal and Hazard Light System" in the wiring diagram. <u>© Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.</u>

LIGHTING SYSTEM > Turn Signal Light and Hazard Light System

INSPECTION

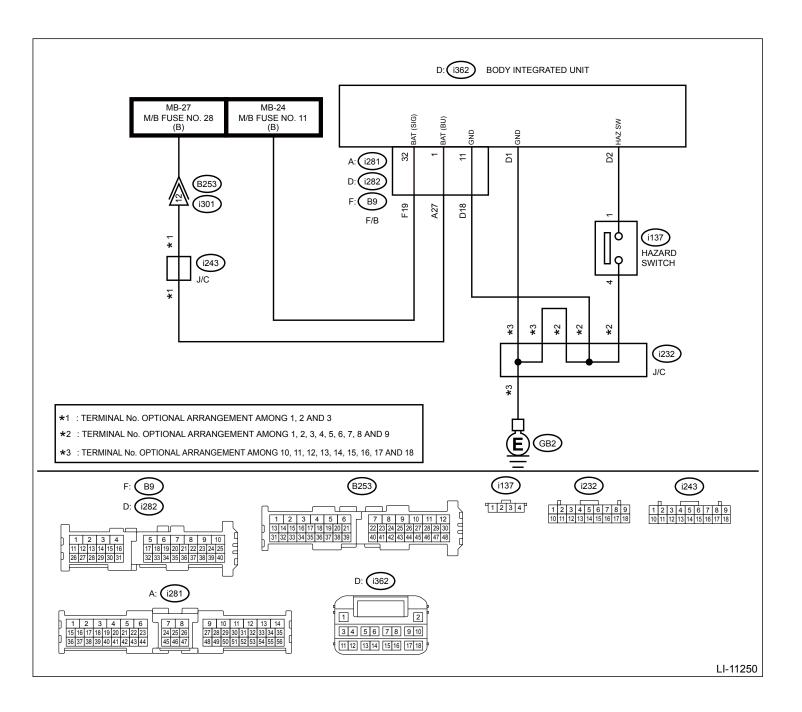
1. TROUBLE SYMPTOM

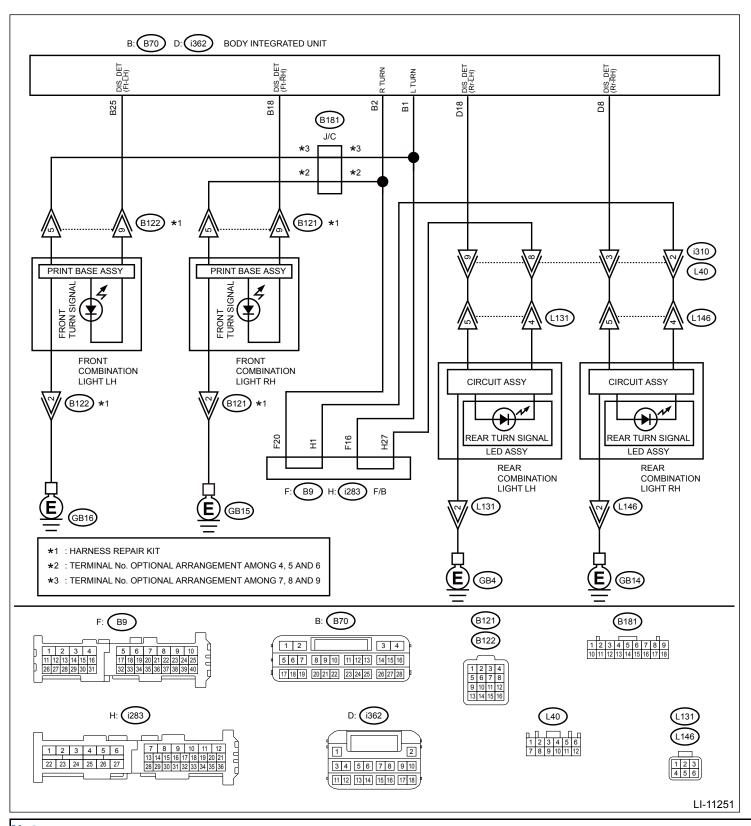
Symptoms	Reference
The hazard light does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light
	and Hazard Light System>INSPECTION > CHECK
	HAZARD LIGHT OPERATION.
The turn signal light does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light
	and Hazard Light System>INSPECTION > CHECK
	TURN SIGNAL LIGHT SYSTEM.
The lane change signal function of the turn signal indicator does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light
	and Hazard Light System>INSPECTION > CHECK
	LANE CHANGE SIGNAL FUNCTION.

2. CHECK HAZARD LIGHT OPERATION

Wiring diagram:

Turn signal and hazard light system <u>Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.</u>





Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK HAZARD LIGHT OPERATION.



- 1. Turn the hazard switch to ON.
- **2.** Check that the hazard light operates properly.

Does the hazard light blink?



The hazard light system is normal.



Go to 2.

2. CHECK FRONT HAZARD (TURN) LIGHT.



Check the front hazard (turn) light. <a> Ref. to LIGHTING SYSTEM>Front Turn Signal Light Bulb.

Is the light normal?



@ Go to 3.

No

Replace the front hazard (turn) light.

3. CHECK DTC.



- **1.** Turn the ignition switch to ON and wait for at least 10 seconds.
- 2. Read the DTC of [Body Control] using the Subaru Select Monitor. <a> Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?



Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.



Go to 4.

4. CHECK CURRENT DATA.



Using Subaru Select Monitor, display [Hazard switch Input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change as $[OFF] \longleftrightarrow [ON]$, when the hazard switch is turned from OFF to ON?

Yes

Go to 8.

No

@ Go to 5.

5. CHECK HAZARD SWITCH.



- 1. Turn the ignition switch to OFF.
- 2. Check the hazard switch. Ref. to LIGHTING SYSTEM>Hazard Switch>INSPECTION.

Is the hazard switch normal?

Yes

Go to 6.

No

Replace the hazard switch. Ref. to LIGHTING SYSTEM>Hazard Switch.

6. CHECK HARNESS.



- 1. Disconnect the connectors of body integrated unit and hazard switch.
- 2. Check the harness between body integrated unit and hazard switch.

Connector & terminal

(i362) No. 2 - (i137) No. 1:

Is harness normal?



Go to 7.





Check the harness between the hazard switch connector and the chassis ground.

Connector & terminal

(i137) No. 4 — Chassis ground:

Is the resistance less than 10 Ω ?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

8. CHECK CURRENT DATA.



- **1.** Turn the ignition switch to ON.
- 2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
 - [Left turn signal output]
 - [Right turn signal output]

Does the display change as $[OFF] \longleftrightarrow [ON]$, when the hazard switch is turned from OFF to ON?



Go to 9.



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

9. CHECK POWER SUPPLY.



- 1. Turn the ignition switch to OFF.
- **2.** Disconnect the connector of body integrated unit.
- 3. Measure the voltage between the body integrated unit connector and chassis ground.

Connector & terminal

```
(B9) No. 19 (+) — Chassis ground (-): (i281) No. 27 (+) — Chassis ground (-):
```

Is the voltage 9 - 16 V?



6 Go to 10.



Check the power supply circuit. <u>Ref. to BODY CONTROL(DIAGNOSTICS)>General Description>INSPECTION.</u>

10. CHECK HARNESS.



- 1. Disconnect the connectors of body integrated unit and each turn signal light.
- 2. Check the harness between body integrated unit and each turn signal light.

Connector & terminal

```
Front turn signal light RH (B70) No. 2 - (B121) No. 5: Front turn signal light LH (B70) No. 1 - (B122) No. 5: Rear turn signal light RH (B70) No. 2 - (L146) No. 4: Rear turn signal light LH (B70) No. 1 - (L131) No. 4:
```

Is harness normal?









Check the harness between each turn light connector and the chassis ground.

Connector & terminal

Front turn signal light RH

(B121) No. 2 — Chassis ground:

Front turn signal light LH

(B122) No. 2 — Chassis ground:

Rear turn signal light RH

(L146) No. 2 — Chassis ground:

Rear turn signal light LH

(L131) No. 2 — Chassis ground:

Is the resistance less than 10 Ω ?

Yes

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

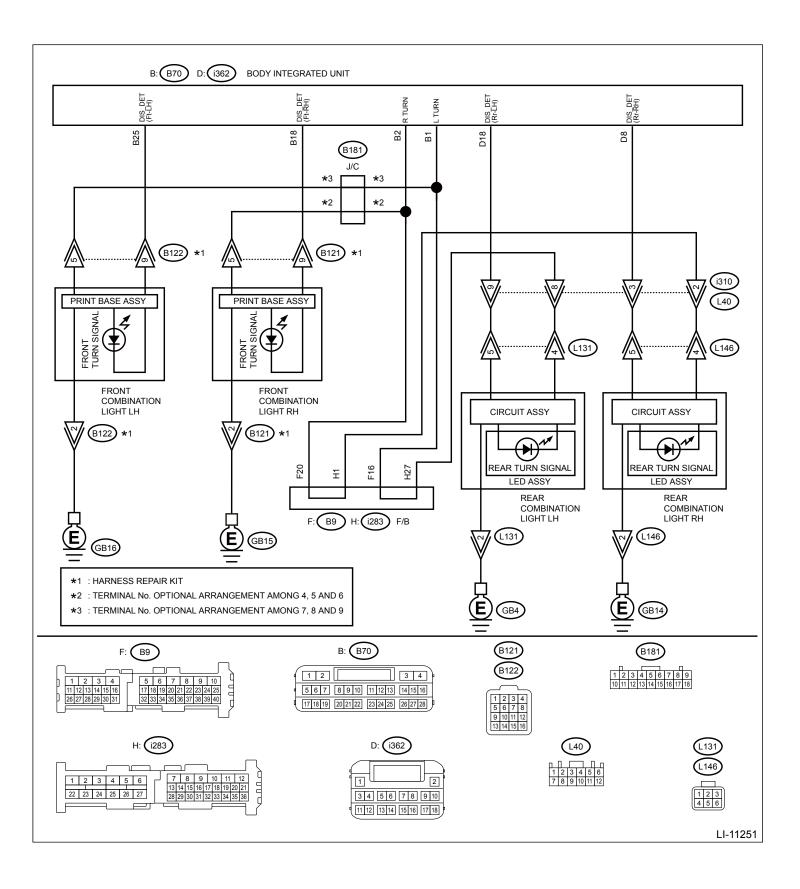
No

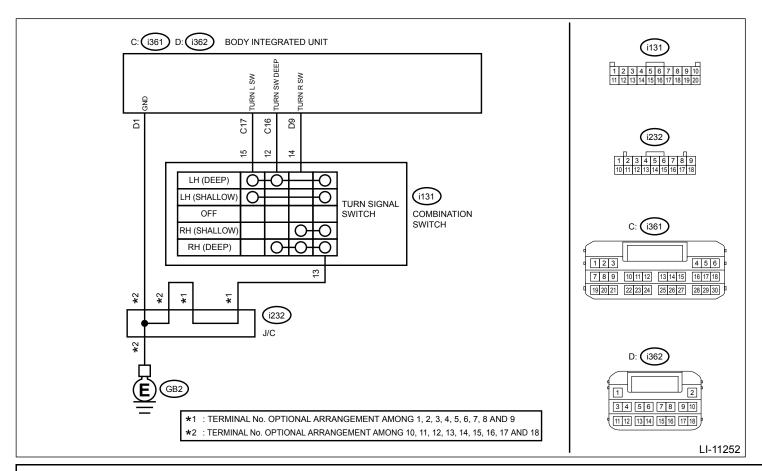
Repair or replace the defective part.

3. CHECK TURN SIGNAL LIGHT SYSTEM

Wiring diagram:

Turn signal and hazard light system Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.





Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK TURN SIGNAL LIGHT OPERATION.



- 1. Turn the ignition switch to ON.
- 2. Turn the turn signal light switch LH and RH to ON.

Does the turn signal light blink?



The turn signal light system is normal.



@ Go to 2.

2. CHECK FRONT HAZARD (TURN) LIGHT.



- 1. Turn the ignition switch to OFF.
- 2. Check the front hazard (turn) light. <a>Ref. to LIGHTING SYSTEM>Front Turn Signal Light Bulb.

Is the light normal?



Go to 3.



Replace the front hazard (turn) light.

3. CHECK POWER SUPPLY.



- **1.** Turn the ignition switch to ON.
- 2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
 - [BATT voltage (control)]
 - [BATT voltage (BACKUP)]
 - [IGN voltage]

Is the voltage 9 - 16 V?



Go to 4.



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

4. CHECK DTC.



- 1. Turn the ignition switch to ON and wait for at least 10 seconds.
- **2.** Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?



Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.



Go to 5.

5. CHECK CURRENT DATA.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Left turn signal input]
- [Right turn signal input]
- [Turn Signal Deep Push Input]

Does the display change as $[OFF] \longleftrightarrow [ON]$, when the turn signal switch is turned from OFF to ON?



@ Go to 6.



Go to 7.



- 1. Turn the ignition switch to OFF.
- 2. Disconnect the connectors of body integrated unit and each turn signal light.
- 3. Check the harness between body integrated unit and each turn signal light.

Connector & terminal

Front turn signal light RH (B70) No. 2 — (B121) No. 5: Front turn signal light LH (B70) No. 1 — (B122) No. 5: Rear turn signal light RH (B70) No. 2 — (L146) No. 4: Rear turn signal light LH (B70) No. 1 — (L131) No. 4:

Is harness normal?







Repair or replace the defective part.

7. CHECK TURN SIGNAL SWITCH.



Check the turn signal switch. Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

Is the turn signal switch OK?



Go to 8.



Replace the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light).



- 1. Disconnect the connectors of body integrated unit and combination switch (light).
- 2. Check the harness between body integrated unit and combination switch (light).

Connector & terminal

```
(i361) No. 17 — (i131) No. 15:
(i361) No. 16 — (i131) No. 12:
(i362) No. 9 — (i131) No. 14:
```

Is harness normal?



Go to 9.



Repair or replace the defective part.

9. CHECK HARNESS.



Check the harness between the combination switch (light) connector and the chassis ground.

Connector & terminal

(i131) No. 13 — Chassis ground:

Is the resistance less than 10 Ω ?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: <u>Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body</u>
 Integrated Unit.

No

Repair or replace the defective part.

4. CHECK LANE CHANGE SIGNAL FUNCTION

Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK HAZARD LIGHT SYSTEM.



Check the hazard light system. Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK HAZARD LIGHT OPERATION.

Is the hazard light system normal?



Go to 2.



Repair the hazard light system.

2. CHECK TURN SIGNAL LIGHT SYSTEM.



Check the turn signal light system. Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK TURN SIGNAL LIGHT SYSTEM.

Is the turn signal light system normal?



Go to 3.



Repair the turn signal light system.

3. CHECK BODY INTEGRATED UNIT SETTING.



- **1.** Turn the ignition switch to ON.
- **2.** Using Subaru Select Monitor, display data of [Lane change signal setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [Support]?



Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Turn the setting to [Support].

5. CHECK TURN SIGNAL SWITCH

For the turn signal switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

6. CHECK HAZARD SWITCH

For the hazard switch inspection, refer to "Hazard Switch". Ref. to LIGHTING SYSTEM>Hazard Switch>INSPECTION.

LIGHTING SYSTEM > Turn Signal Light and Hazard Light System

NOTE

For operation procedures of components of the turn signal and hazard light system, refer to the following sections

- Headlight assembly: <a>Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Front turn signal light bulb: Ref. to LIGHTING SYSTEM>Front Turn Signal Light Bulb.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Rear combination light assembly:
 Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- Hazard switch: Ref. to LIGHTING SYSTEM>Hazard Switch.

LIGHTING SYSTEM > Back-up Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Back-up Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Back-up Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Back-up Light System

INSPECTION

1. CHECK INHIBITOR SWITCH

For the inhibitor switch inspection, refer to "Inhibitor Switch" in the "AUTOMATIC TRANSMISSION" section.

Ref. to AUTOMATIC TRANSMISSION>Inhibitor Switch>INSPECTION.

2. BACK-UP LIGHT SWITCH CHECK

For the back-up light switch inspection, refer to "Back-up Light Switch" in the "MANUAL TRANSMISSION" section. Ref. to MANUAL TRANSMISSION>Switches and Harness>INSPECTION > BACK-UP LIGHT SWITCH.

LIGHTING SYSTEM > Back-up Light System

NOTE

For operation procedures of components of the back-up light system, refer to the following sections.

- Back-up light assembly: Ref. to LIGHTING SYSTEM>Back-up Light Assembly.
- Back-up light bulb: Ref. to LIGHTING SYSTEM>Back-up Light Bulb.

LIGHTING SYSTEM > Stop Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Stop Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Stop Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Stop Light System

INSPECTION

1. CHECK STOP LIGHT SWITCH

For the stop light switch inspection, refer to "Stop Light Switch" in the "BRAKE" section. Ref. to BRAKE>Stop Light Switch>INSPECTION.

2. STOP LIGHT CHECK

For the stop light inspection, refer to the following sections.

- Rear combination light assembly: <a>Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly>INSPECTION.
- High-mounted stop light: Ref. to LIGHTING SYSTEM>High-mounted Stop Light>INSPECTION.

LIGHTING SYSTEM > Stop Light System

NOTE

For operation procedures of components of the stop light system, refer to the following sections.

- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- High-mounted stop light: Ref. to LIGHTING SYSTEM>High-mounted Stop Light.
- Stop light switch: Ref. to BRAKE>Stop Light Switch.

LIGHTING SYSTEM > Interior Light System

WIRING DIAGRAM

For the wiring diagram, refer to "Interior Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Interior Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Interior Light System

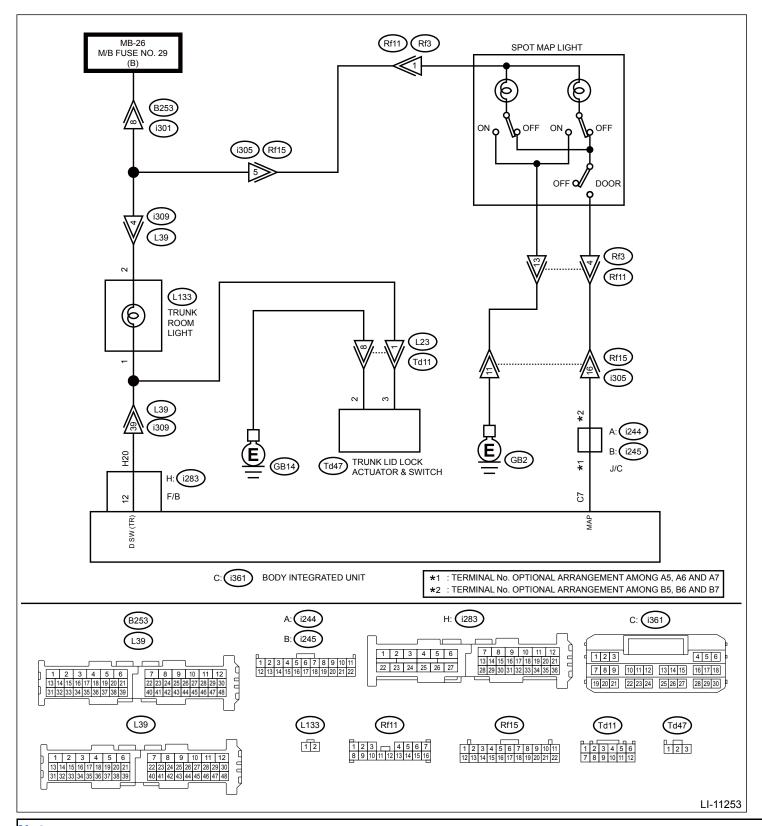
INSPECTION

1. TROUBLE SYMPTOM

The spot map light or trunk room light does not illuminate.

Wiring diagram:

Interior light system Ref. to WIRING SYSTEM>Interior Light System>WIRING DIAGRAM.



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK INTERIOR LIGHT ILLUMINATION.



Note:

Perform the check from step 2 since there is no ON position for the trunk room light.

- 1. Turn the interior light switch to ON.
- 2. Check that the interior light operates properly.

Does the interior light illuminate?



60 to 7.



@ Go to 2.

2. CHECK THE LIGHTS.



- 1. Disconnect the connector of the light which did not illuminate.
- **2.** Check between the connector terminals of the light (ON position).

Connector & terminal

Spot map light

$$(Rf3) No. 1 - (Rf3) No. 13:$$

3. Check between the connector terminals of light (door position).

Spot map light

$$(Rf3) No. 1 - (Rf3) No. 4:$$

4. Check between the connector terminals of trunk room light.

Connector & terminal

- Is the resistance less than 1 Ω ? (Except for spot map light)
- Is the resistance approximately 18 Ω ? (Spot map light)



Go to 3.



Repair or replace the light.

3. CHECK FUSE.



Check the M/B fuse No. 29. Ref. to LIGHTING SYSTEM>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse OK?







Replace the fuse.

4. CHECK CONNECTOR.



Check the connecting condition of connector.

Is the connector firmly installed?









- 1. Turn the ignition switch to OFF.
- 2. Disconnect the connector of the light which did not illuminate.
- 3. Check the harnesses between light (ON position) connector and chassis ground.

Connector & terminal

Spot map light

(Rf11) No. 13 — Chassis ground:

4. Check the harness between the trunk room light connector and lock assembly trunk lid.

Connector & terminal

(L133) No. 1 - (Td47) No. 3:

5. Check the harness between the lock assembly trunk lid and chassis ground.

Connector & terminal

(Td47) No. 2 — Chassis ground:

Is harness normal?



Go to 6.



Repair or replace the defective part.

6. CHECK HARNESS.



Check the harness between the M/B fuse and light.

Connector & terminal

Spot map light

M/B fuse No. 29 (downstream side) — (Rf11) No. 1:

Trunk room light

M/B fuse No. 29 (downstream side) — (L133) No. 2:

Is harness normal?



The interior light system is normal.



7. CHECK OPERATION.



- **1.** Turn the interior light switch to the DOOR position.
- 2. Open a door.

Does the interior light illuminate?



The interior light system is normal.



@ Go to 8.

8. CHECK HARNESS.



Check the harnesses between light connector and body integrated unit.

Connector & terminal

Spot map light

(Rf11) No. 4 - (i361) No. 7:

Trunk room light

(L133) No. 1 — (i283) No. 20:

Is harness normal?







9. CHECK CURRENT DATA.



Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].

Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Driver's door SW input]
- [P-door SW input]

Does the display switch between $[OFF] \longleftrightarrow [ON]$ when the door is opened/closed?



Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.



Check the door switch and harness.

2. CHECK DOOR SWITCH

For the door switch inspection, refer to "Door Switch". Ref. to LIGHTING SYSTEM>Door Switch>INSPECTION.

3. CHECK TRUNK LID LATCH SWITCH

For the inspection of the trunk lid latch switch, refer to "Trunk Lid Latch and Actuator Assembly" in the "SECURITY AND LOCKS" section. Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly>INSPECTION.

LIGHTING SYSTEM > Interior Light System

NOTE

For operation procedures of components of the interior light system, refer to the following sections.

- Spot map light: Ref. to LIGHTING SYSTEM>Spot Map Light.
- Trunk room light: Ref. to LIGHTING SYSTEM>Trunk Room Light.
- Vanity mirror light: Ref. to LIGHTING SYSTEM>Vanity Mirror Light.
- Door switch: Ref. to LIGHTING SYSTEM>Door Switch.

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

WIRING DIAGRAM

For the wiring diagram, refer to "Headlight Beam Leveler System" in the wiring diagram. Ref. to WIRING SYSTEM>Headlight Beam Leveler System>WIRING DIAGRAM.

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" in "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)".

Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS) > Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)".

Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" in "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)". Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Control Module I/O Signal>ELECTRICAL SPECIFICATION.

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

OPERATION

Caution:

- If the indicator does not flash three times or the headlight beam does not operate, it can be assumed that there is an open circuit or faulty wiring in the harness of the auto headlight beam leveler CM, or headlight assembly. Perform inspection and repairs according to the inspection results, and then perform initialization again. Ref. to LIGHTING
 SYSTEM>Auto Headlight Beam Leveler System>OPERATION > INITIALIZATION.
- If any of the following conditions is met, the headlight beam may deviate. If the headlight beam deviates, perform fuse resetting. Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>OPERATION > FUSE RESET.
 - Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the ignition switch is turned to ON.
 - Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the vehicle speed is 0 km/h (0 MPH).

When parts related to the auto headlight beam leveler system are removed or replaced, perform the following procedures to carry out initialization.

Note:

Before performing initialization, check the following:

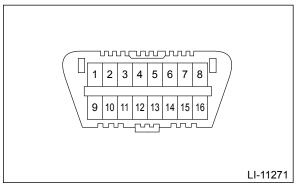
- The vehicle is parked on a level surface.
- The inflation pressure of tires is correct.
- The vehicle does not have load.
- Vehicle's fuel tank is fully filled.

1. INITIALIZATION

- **1.** Turn the ignition switch to ON.
- **2.** Use the ST to short-circuit data link connectors 1-4.

Preparation tool:

ST: DIAGNOSIS CHECK WIRE (09843-18040)



3. After short-circuiting the connectors, set the lighting switch to a position other than HEAD (AUTO or OFF) \rightarrow HEAD \rightarrow a position other than HEAD again (AUTO or OFF). Perform this step twice.

Note:

- Start operating the switch within 20 seconds after short-circuiting the terminals.
- Operate the switch approx. at 3-second intervals.
- **4.** After operating the lighting switch, check the auto leveler indicator light.

Display	Result
Blinks 6 times at 2 Hz \rightarrow	Initialization completed normally
Continues blinking twice at 2 Hz	
Continues blinking 6 times at 2	Initialization error
Hz	

Note:

If the initialization process fails, turn the ignition switch to OFF, and start over from step 1.

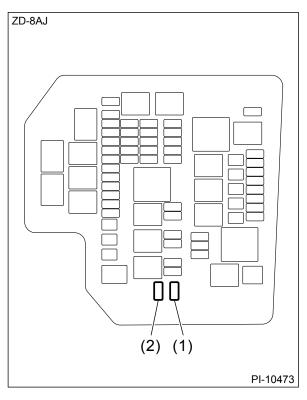
5. After confirming that the initialization process has been successfully completed, turn the ignition switch to OFF.

Note:

The indicator light signaling a successfully completed initialization process will continue to blink until you turn the ignition switch to OFF.

2. FUSE RESET

- 1. Park the vehicle on a level ground.
- 2. Turn the ignition switch to OFF and remove the delivery mode fuse from the position (2).
- 3. Install the delivery mode fuse in the position (1) and then turn the ignition switch to ON.
- 4. Turn the ignition switch to OFF, install the delivery mode fuse in the position (2), and start the engine.



LIGHTING SYSTEM > Auto Headlight Beam Leveler System

NOTE

For operation procedures of components of the auto headlight beam leveler system, refer to the sections below.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Auto headlight beam leveler CM: Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler Control Module.

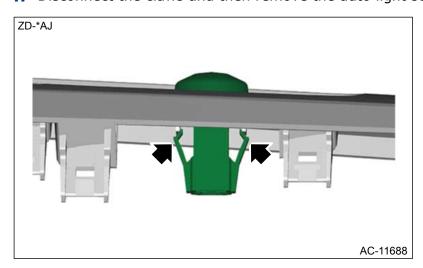
LIGHTING SYSTEM > Light Control Sensor

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- **2.** Remove the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>REMOVAL > TWEETER.
- **3.** Remove the grille front defroster.
 - (1) Release the clips.



- (2) Disconnect the connector and remove the grille front defroster.
- **4.** Disconnect the claws and then remove the auto light sensor.



LIGHTING SYSTEM > Light Control Sensor

INSTALLATION

- **1.** Install the auto light sensor.
- 2. Connect the connector, and install the grille front defroster.

- **3.** Install the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>INSTALLATION > TWEETER.
- 4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Light Control Sensor

INSPECTION

For the inspection of the light control sensor, refer to AUTO HEADLIGHT SYSTEM CHECK of Headlight System. Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > AUTO HEADLIGHT SYSTEM CHECK.

LIGHTING SYSTEM > Combination Switch (Light)

REMOVAL

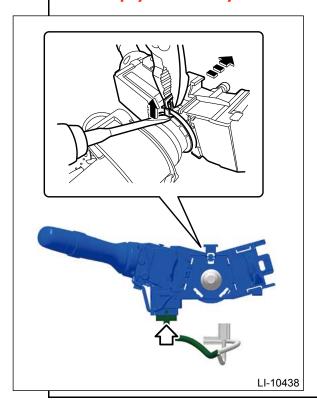
Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

- **1.** Set the steering wheel to the straight-ahead position.
- 2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
- **4.** Remove the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>REMOVAL.
- **5.** Remove the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
- 6. Remove the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>REMOVAL.
- 7. Remove the switch assembly combination wiper. Ref. to WIPER AND WASHER SYSTEMS>Combination Switch (Wiper)>REMOVAL.
- **8.** Remove the switch assembly combination turn dimmer.
 - (1) Disconnect the connector.
 - (2) Using pliers, loosen the clamp.
 - (3) With the clamp loosened, release the claw using a flat tip screwdriver wrapped with protective tape, and remove the switch assembly combination turn dimmer.

Caution:

Do not pry off forcibly. Otherwise, the claws may be damaged.



LIGHTING SYSTEM > Combination Switch (Light)

INSTALLATION

Caution:

- Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".
 <u>Description>CAUTION.</u>
- Do not allow harness and connectors to interfere or get tangled up with other parts.
- If the steering wheel has been removed, make sure that the steering roll connector is not turned from the original position.
- 1. Install the switch assembly combination turn dimmer.
 - (1) Using pliers, loosen the clamp.
 - (2) With the clamp loosened, insert so that the cutout of the column assembly steering and the claw of the switch assembly combination turn dimmer are aligned, and then engage them.
 - (3) Install the clamp, and connect the connector.

Note:

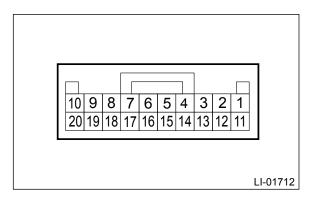
When replacing with a new part, engage the claw first, and then pull out the securing pin of the clamp.

- 2. Install the switch assembly combination wiper. Ref. to WIPER AND WASHER SYSTEMS>Combination Switch (Wiper)>INSTALLATION.
- 3. Install the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>INSTALLATION.
- **4.** Align the center position of the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.
- **5.** Install the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
- **6.** Install the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>INSTALLATION.
- 7. Install the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.
- **8.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- **9.** Perform VSC (VDC) sensor midpoint setting mode. Ref. to VEHICLE STABILITY CONTROL>VSC (VDC) Control Module and Hydraulic Control Unit (VSCCM&H/U)>ADJUSTMENT > VSC (VDC) SENSOR MIDPOINT SETTING MODE.

LIGHTING SYSTEM > Combination Switch (Light)

INSPECTION

Measure the resistance between connector terminals. If it is not within the standard value, replace the switch assembly combination turn dimmer.



1. LIGHTING SWITCH

• Other than for C0

Terminal No.	Inspection conditions	Standard
18 — 13		
19 — 13	Switch OFF	1 M Ω or more
20 — 13		
19 — 13	Switch AUTO	Less than 1 Ω
18 — 13	Switch TAIL	Less than 1 Ω
18 — 13	Curitoh HEAD	Loss than 1 O
20 — 13	Switch HEAD	Less than 1 Ω

• For C0

Terminal No.	Inspection conditions	Standard
18 — 13	Switch OFF	Less than 1 Ω
18 — 13		
19 — 13	Switch AUTO	1 M Ω or more
20 — 13		
19 — 13	Switch TAIL	Less than 1 Ω
19 — 13	Switch HEAD	Loss than 1 O
20 — 13	Switch HEAD	Less than 1 Ω

2. DIMMER & PASSING SWITCH

Terminal No.	Inspection conditions	Standard
17 — 13	Switch PASS	Less than 1 Ω
16 — 13	Switch UP	Less than 1 Ω

3. TURN SIGNAL SWITCH

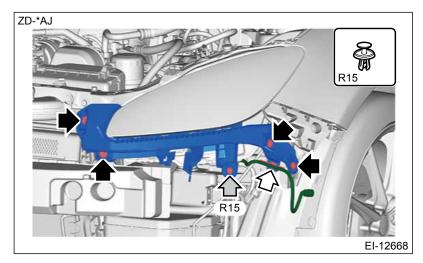
Terminal No.	Inspection conditions	Standard
14 — 13	Switch TURN RH (SHALLOW)	Less than 1 Ω
12 - 13 $14 - 13$	Switch TURN RH (DEEP)	Less than 1 Ω

15 — 13	Switch TURN LH (SHALLOW)	Less than 1 Ω
12 — 13 15 — 13	Switch TURN LH (DEEP)	Less than 1 Ω

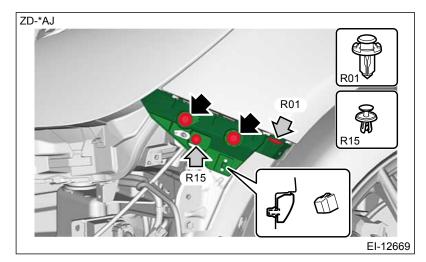
LIGHTING SYSTEM > Headlight Assembly

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>REMOVAL.
- 3. Remove the bracket corner front.
 - (1) Remove the harness clip of the light assembly side marker.
 - (2) Remove the bolts and clips, and remove the bracket corner front.



- **4.** Remove the bracket side front.
 - (1) Remove the bolt and clip.
 - (2) Remove the claws from behind the fender front, and remove the bracket side front.

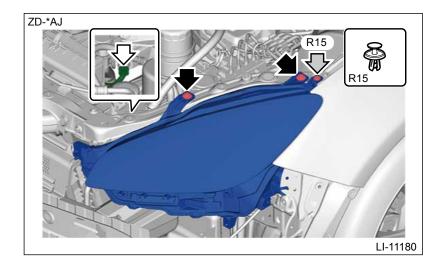


5. Remove the light assembly head.

Caution:

Be careful not to damage the headlight assembly and the fender COMPL front.

- (1) Disconnect the connector.
- (2) Remove the bolts and clips, and remove the light assembly head.



LIGHTING SYSTEM > Headlight Assembly

INSTALLATION

Caution:

Before installing the headlight assembly, check the condition of the cap. If any damage is found, replace the cap with a new one.

1. Install the light assembly head, and then connect the connector.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

Install the bracket side front.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

3. Install the bracket corner front.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

- 4. Install the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>INSTALLATION.
- **5.** Check and adjust the clearance between the hood COMPL front and the light assembly head. EXTERIOR BODY PANELS Front Hood ADJUSTMENT.
- **6.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- **7.** Adjust the headlight beam. Ref. to LIGHTING SYSTEM>Headlight Assembly>ADJUSTMENT > HEADLIGHT BEAM ADJUSTMENT.

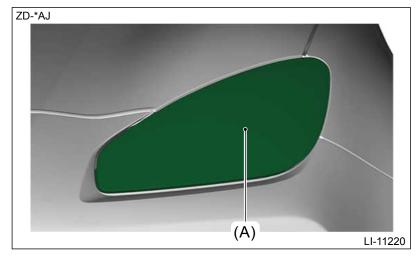
LIGHTING SYSTEM > Headlight Assembly

ADJUSTMENT

1. HEADLIGHT BEAM ADJUSTMENT

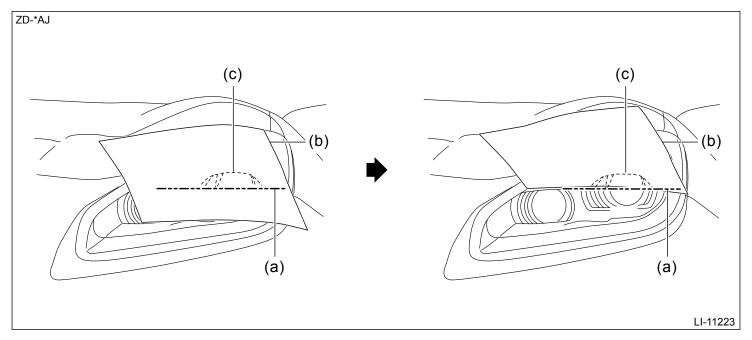
Caution:

- Turn off the light before adjusting the headlight beam level. If it is necessary to inspect the beam level, do not keep the light on for two minutes or more.
- When blocking the light emitted from the headlight, use a light shield or equivalent.
 Do not apply the tape on the lens or place the cloth over it. It may raise the temperature in the light and cause deformation/bubble formations of the plastic lens.
- If any of the following conditions is met, the headlight beam may deviate. If the headlight beam deviates, perform fuse resetting. Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>OPERATION > FUSE RESET.
 - Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the ignition switch is turned to ON.
 - Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the vehicle speed is 0 km/h (0 MPH).
- **1.** Before checking the headlight beam level, be sure of the following:
 - Check the area around the headlight for any scratches, damage or other type of deformation.
 - The vehicle is parked on a level surface.
 - The inflation pressure of tires is correct.
 - The vehicle does not have load.
 - Vehicle's fuel tank is fully filled.
- **2.** Bounce the vehicle several times to normalize the suspension.
- 3. Make certain that someone is seated in the driver's seat.
- 4. Start the engine and charge the battery.
- **5.** Measure the distance of the light source centers and the height of the light source centers for the low beam.

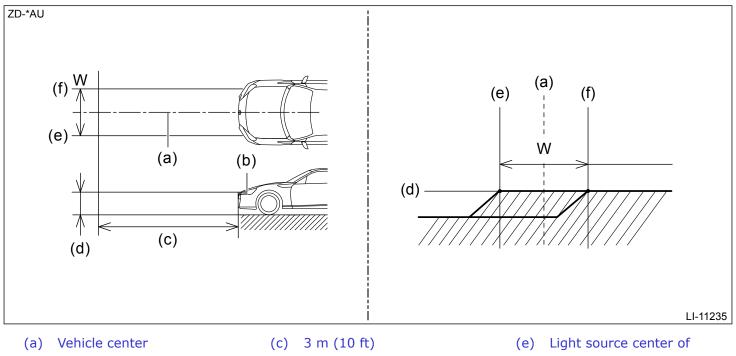


(A) Light source center

- **6.** Adjust the headlight beam.
 - (1) Position the vehicle with its front end facing the measuring panel from a distance of 3 m (10 ft).
 - (2) Turn on the low beam headlights, and mark the cut line.
 - Use a sheet of unruled white paper (b), and highlight the projector shadow (c).
 - 2. Align the bottom edge of the white paper sheet with the cut line (a) on the projector side.



(3) Check the beam level.

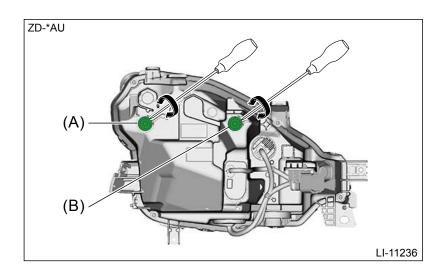


headlight LH

- (b) Light source center
- (d) Height of light source center
- (f) Light source center of headlight RH

W mm (in)	
1,316 (51.81)	

(4) Adjust the beam level by turning the aiming screws (A) and (B) in the same direction and by the same number of rotations.

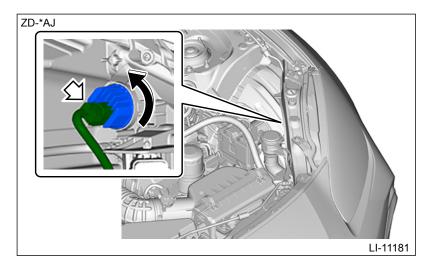


LIGHTING SYSTEM > Front Turn Signal Light Bulb

REMOVAL

Caution:

- Do not leave the light assembly head without the LED module for a long time. Dust, moisture, etc. entering the light may affect its performance.
- Replace the LED module while it is completely cool.
- Do not touch the LED light emitting section, boards and elements to prevent static electricity from being applied to the LED module.
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the LED module.
 - (1) Disconnect the connector.
 - (2) Rotate in the direction of the arrow shown in the figure to remove the LED module.



LIGHTING SYSTEM > Front Turn Signal Light Bulb

INSTALLATION

Caution:

- Check the LED module for adhesion of moisture, dirt, dust or other foreign matter.
- Make sure there is no damage on the gasket. Replace the LED module if damage is found.
- Do not touch the LED light emitting section, boards and elements to prevent static electricity from being applied to the LED module.
- 1. Install the LED module, and connect the connector.
- 2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Front Turn Signal Light Bulb

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side.

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Standard
2 (+) - 1 (-)	Apply battery voltage.	Light ON

2. Replace the LED module if faulty is found in the inspection.

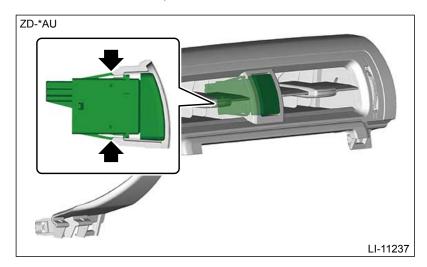
LIGHTING SYSTEM > Hazard Switch

REMOVAL

Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

- 1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- **2.** Remove the cover LWR driver INN. <a>Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL > INSIDE.
- **4.** Release the claws, and then remove the switch hazard.



LIGHTING SYSTEM > Hazard Switch

INSTALLATION

Caution:

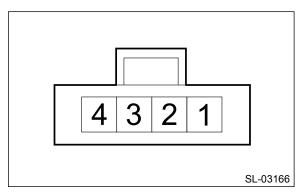
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

- **1.** Install the switch hazard.
- 2. Install the panel center UPR assembly and cover assembly instrument panel side RH. Ref. to AIR CONDITIONER>Air Vent Grille>INSTALLATION > CENTER GRILLE.
- 3. Install the cover LWR driver INN. <a>Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower <a>Cover>INSTALLATION > INSIDE.
- 4. Connect the ground terminal to battery sensor. <a> Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Hazard Switch

INSPECTION

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
1 4	Switch OFF	1 M Ω or more
1 — 4	Switch ON	Less than 1 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side.

Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
2 (+) — 3 (–)	Apply battery voltage.	Light ON

3. Replace the switch hazard if it is found defective.

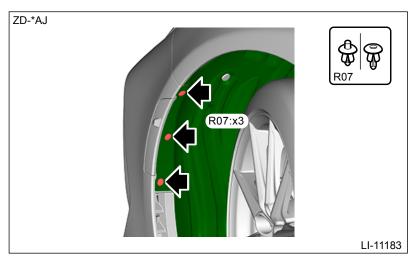
LIGHTING SYSTEM > Front Side Marker Light Assembly

REMOVAL

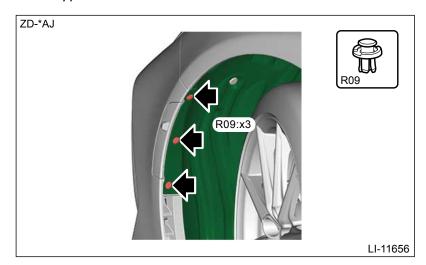
Note:

The procedure shows the LH side.

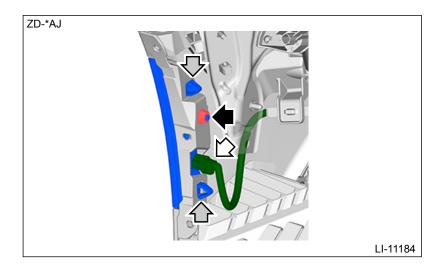
- 1. Turn the front tires all the way to the right side.
- 2. Disconnect the ground terminal from battery sensor. <a> Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 3. Remove the clips, and turn over the mud guard front LH.
 - Type A



• Type B



- 4. Remove the light assembly side marker LH.
 - (1) Disconnect the connector.
 - (2) Remove the bolts and release the claws, and then remove the light assembly side marker LH.



LIGHTING SYSTEM > Front Side Marker Light Assembly

INSTALLATION

Note:

The procedure shows the LH side.

- 1. Install the light assembly side marker LH, and then connect the connector.
 - **Tightening torque:**
 - 7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
- 2. Install the mud guard front LH. <a>Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
- 3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Front Side Marker Light Assembly

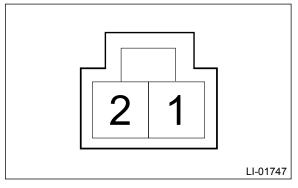
INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side.

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
1 (+) - 2 (-)	Apply battery voltage.	Light ON

2. Replace the light assembly side marker if a fault is found in the inspection.

Note:

Since an LED is used for the light, replace the light assembly side marker if the light does not illuminate.

LIGHTING SYSTEM > Rear Combination Light Assembly

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the cover assembly rear combination light.

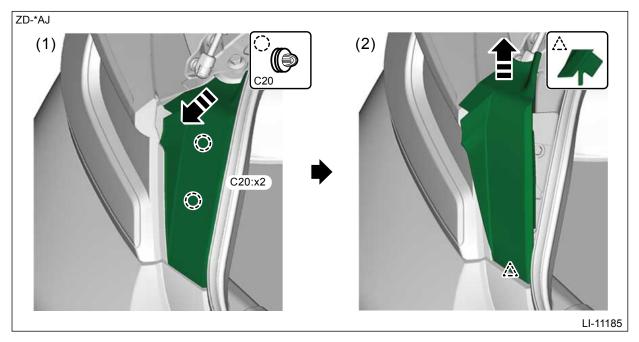
Caution:

Do not remove the cover forcibly if the cover is not unhooked. The cover claws or bumper face rear can get damaged.

Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.

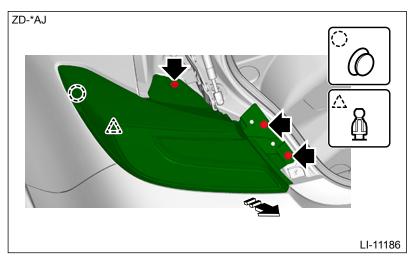
- (1) Pull the upper part of the cover assembly rear combination light in the arrow direction to disengage the clip.
- (2) Pull the lower part of the cover assembly rear combination light from the bumper face rear.



- **3.** Remove the light assembly rear combination.
 - (1) Release the bolts and clips, then pull out the light assembly rear combination to the rear of the vehicle as shown in the figure.

Caution:

Be careful not to damage the clips.



(2) Disconnect the connector and remove the light assembly rear combination.

LIGHTING SYSTEM > Rear Combination Light Assembly

INSTALLATION

1. Connect the connector, and install the light assembly rear combination.

Caution:

- Be careful not to catch the harness in between the parts.
- Make sure that a gasket is attached to the light assembly rear combination. If a gasket is not attached, water leakage may occur.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

- 2. Install the cover assembly rear combination light.
- 3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Rear Combination Light Assembly

REPLACEMENT

1. END RUBBER

1. Pull the end rubber to remove it. Be careful not to tear the rubber.

Caution:

- Be careful not to damage the surface of the light assembly rear combination.
- Do not reuse the end rubber.
- 2. Remove the double-sided tape remaining on the light assembly rear combination, and then clean the adhesive surface.

Caution:

Do not use any solvents that may damage the light assembly rear combination.

Note:

If even a slight amount of double-sided tape remains on the adhesive surface, it may lead to improper adhesion.

3. Degrease the mounting surface of the end rubber.

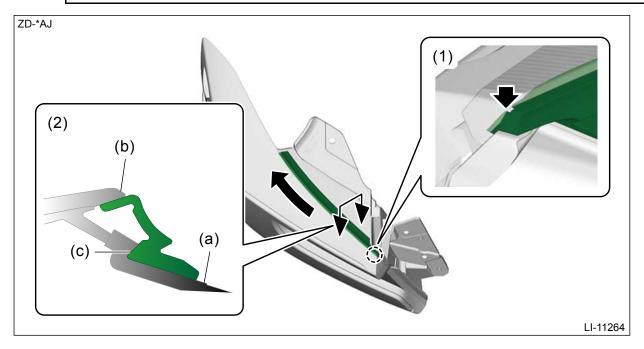
4. Attach the end rubber.

Note:

- Attach the end rubber so that the double-sided tape does not detach from the light assembly rear combination.
- Press down on the end rubber to fix the double-sided tape.
- (1) Insert the end rubber tip into the gap between the lens and housing.
- (2) Push the end rubber against the housing to install it.

Note:

- Attach it in the arrow direction.
- Make sure the end rubber does not stick out of the corner of the application surface (a) and lens (b).
- Install the end rubber by fitting it into the housing corner (c).



LIGHTING SYSTEM > Rear Combination Light Assembly

DISASSEMBLY

1. TAIL LIGHT

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

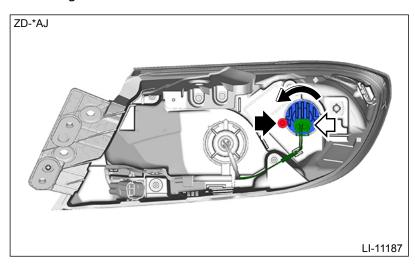
2. STOP LIGHT

Caution:

- Do not leave the light assembly rear combination without the LED module for a long time. Dust, moisture, etc. entering the light may affect its performance.
- If the screws cannot be fastened tightly, replace the light assembly rear combination with a new one.
- Replace the LED module while it is completely cool.
- Do not touch the LED light emitting section, boards and elements to prevent static electricity from being applied to the LED module.

1. Remove the LED module.

- (1) Disconnect the connector.
- (2) Remove the TORX $^{\otimes}$ screw, and rotate the LED module in the direction of the arrow shown in the figure to remove it.



3. TURN SIGNAL LIGHT

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

LIGHTING SYSTEM > Rear Combination Light Assembly

ASSEMBLY

1. TAIL LIGHT

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

2. STOP LIGHT

Caution:

- If the screws cannot be fastened tightly, replace the light assembly rear combination with a new one.
- Check the LED module for adhesion of moisture, dirt, dust or other foreign matter.
- Make sure there is no damage on the gasket. Replace the LED module if damage is found.
- Do not touch the LED light emitting section, boards and elements to prevent static electricity from being applied to the LED module.
- 1. Install the LED module.
- **2.** Connect the connector.

3. TURN SIGNAL LIGHT

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

LIGHTING SYSTEM > Rear Combination Light Assembly

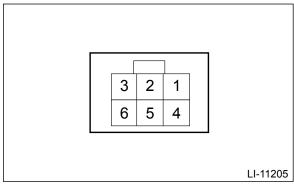
INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side.

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
3 (+) - 2 (-)		Stop light on
1 (+) — 2 (-)	Apply battery voltage.	Tail lights and rear side marker lights on
4 (+) - 2 (-)		Turn signal light on

- **2.** Carry out the following procedure if you find any defects.
 - Stop light: check the harness and LED unit.
 - Since LEDs are used for the following lights, replace the light assembly rear combination if the lights do not illuminate.
 - Tail light

- Rear side marker light
- Turn signal light

LIGHTING SYSTEM > Back-up Light Assembly

REMOVAL

Note:

If the SUBARU genuine accessory is installed on the bumper face rear, check the operation manual accompanied with the accessory.

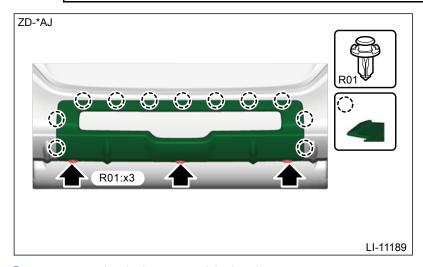
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS NOTE > BATTERY.
- 2. Remove the cover back-up rear.
 - (1) Remove the clip.
 - (2) Release the claws, and then remove the cover back-up rear.

Caution:

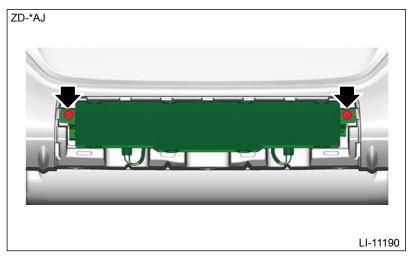
Do not remove the cover forcibly if the cover is not unhooked. The cover claws or bumper face rear can get damaged.

Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.



- 3. Remove the light assembly back-up.
 - (1) Remove the bolts, and pull out the light assembly back-up to the rear side of the vehicle.



(2) Disconnect the connector, and remove the light assembly back-up.

LIGHTING SYSTEM > Back-up Light Assembly

INSTALLATION

1. Connect the connector, and install the light assembly back-up.

Caution:

- Be careful not to catch the harness in between the parts.
- Confirm that a cap is attached to the light assembly back-up. If the cap is not attached, water leakage may occur.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

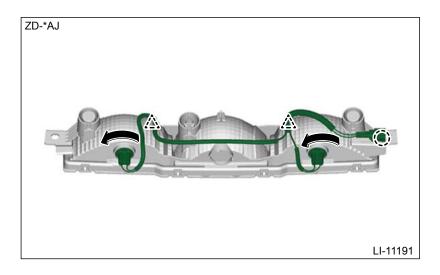
- 2. Install the cover back-up rear.
- 3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Back-up Light Assembly

DISASSEMBLY

1. CORD ASSEMBLY

- 1. Remove the cord assembly.
 - (1) Remove the connector clip.
 - (2) Remove the harness from the harness clamp.
 - (3) Rotate the bulb socket in the direction of the arrow shown in the figure to remove it, and then remove the cord assembly.

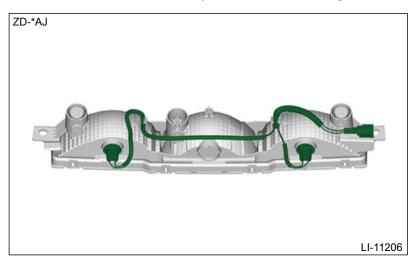


LIGHTING SYSTEM > Back-up Light Assembly

ASSEMBLY

1. CORD ASSEMBLY

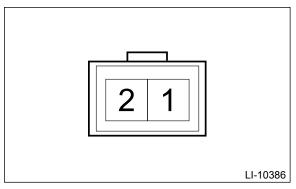
1. Install the cord assembly as shown in the figure.



LIGHTING SYSTEM > Back-up Light Assembly

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.



Terminal No.	Inspection conditions	Specification
2 (+) - 1 (-)	Apply battery voltage.	Back-up light on

2. Replace the harness and bulb if it is found defective.

LIGHTING SYSTEM > Back-up Light Bulb

REMOVAL

Caution:

- Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.
- Do not leave the light assembly back-up without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.

Note:

If the SUBARU genuine accessory is installed on the bumper face rear, check the operation manual accompanied with the accessory.

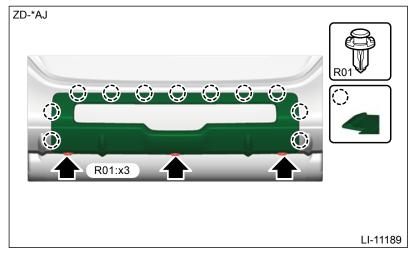
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- **2.** Remove the cover back-up rear.
 - (1) Remove the clip.
 - (2) Release the claws, and then remove the cover back-up rear.

Caution:

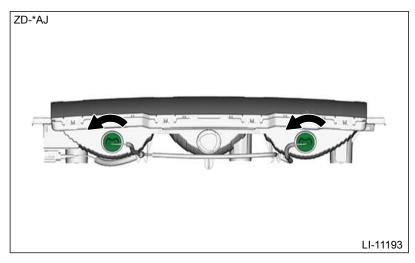
Do not remove the cover forcibly if the cover is not unhooked. The cover claws or bumper face rear can get damaged.

Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.



3. Rotate the bulb socket in the direction of the arrow shown in the figure.



4. Remove the back-up light bulb.

LIGHTING SYSTEM > Back-up Light Bulb

INSTALLATION

Caution:

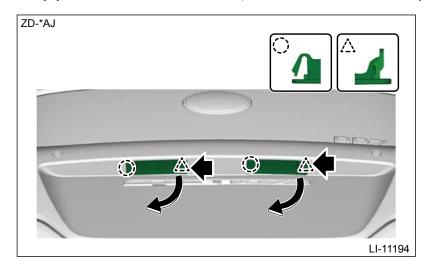
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

- 1. Install the back-up light bulb.
- 2. Install the bulb socket.
- 3. Install the cover back-up rear.
- 4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > License Plate Light

REMOVAL

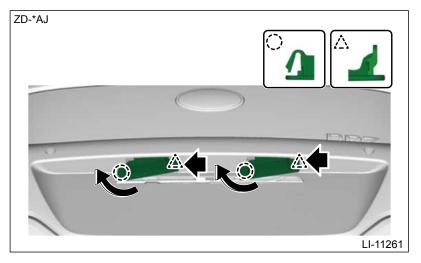
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the license plate light.
 - (1) Release the claws in the arrow direction, and pull out the license plate light.
 - (2) Disconnect the connector, and remove the license plate light.



LIGHTING SYSTEM > License Plate Light

INSTALLATION

1. Connect the connector, and install the license plate light.



2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > License Plate Light

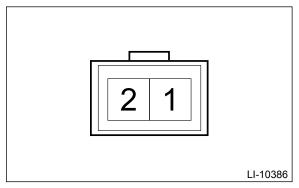
INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
1 (+) - 2 (-)	Apply battery voltage.	Light ON

2. Replace the license plate light if any problem is found in the inspection.

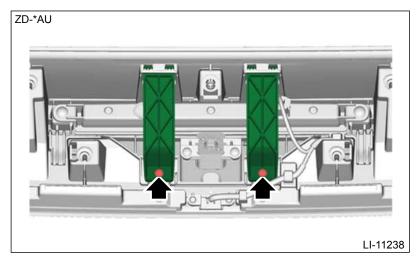
Note:

Since LED is used for the license plate light, replace the license plate light if the light does not illuminate.

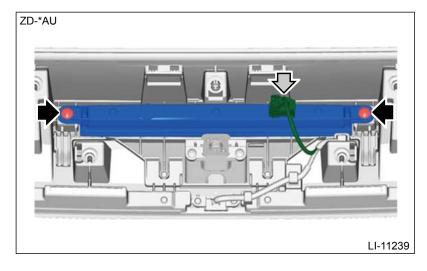
LIGHTING SYSTEM > High-mounted Stop Light

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- 2. Remove the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
- 3. Remove the garnish assembly trunk. <a> Ref. to EXTERIOR/INTERIOR TRIM>Trunk Garnish>REMOVAL.
- **4.** Remove the screws, and then remove the garnish bracket.



- 5. Remove the light assembly high-mounted.
 - (1) Disconnect the connector.
 - (2) Remove the screws, and remove the light assembly high-mounted.



LIGHTING SYSTEM > High-mounted Stop Light

INSTALLATION

1. Install the light assembly high-mounted, and connect the connector.

Tightening torque:

2 N·m (0.2 kgf-m, 1.5 ft-lb)

- 2. Install the garnish bracket.
- **3.** Install the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Garnish>INSTALLATION.

- **4.** Install the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
- 5. Connect the ground terminal to battery sensor. <a> Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > High-mounted Stop Light

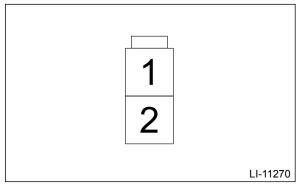
INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (-) side.

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
1 (+) - 2 (-)	Apply battery voltage.	Light ON

2. Replace the light assembly high-mounted if faulty is found in the inspection.

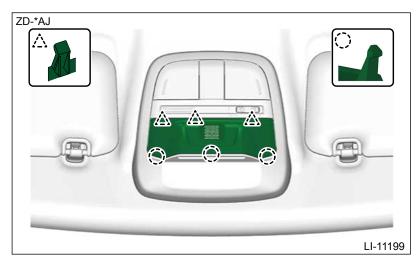
Note:

Since LED is used for the high-mounted stop light, replace the light assembly highmounted if the light does not illuminate.

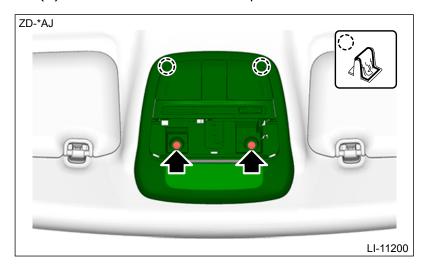
REMOVAL

1. MODELS WITHOUT EyeSight

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- 2. Release the claws, and then remove the cover assembly map light.



- **3.** Remove the light assembly map.
 - (1) Remove the screws and clips.



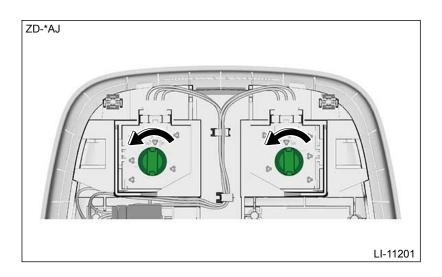
- (2) Disconnect the connector, and remove the light assembly map.
- 4. Remove the spot map light bulb.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:

Perform this procedure only when required.



2. MODELS WITH EyeSight

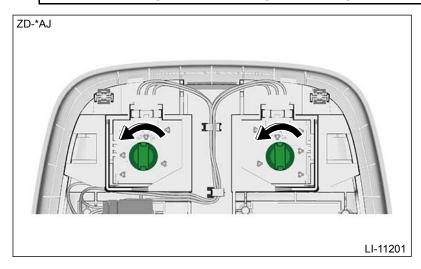
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- 2. Remove the cover assembly stereo camera. <a> Ref. to EyeSight>Stereo Camera>REMOVAL.
- Remove the spot map light bulb.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:

Perform this procedure only when required.



LIGHTING SYSTEM > Spot Map Light

INSTALLATION

1. MODELS WITHOUT EyeSight

1. Install the spot map light bulb.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

2. Connect the connector, and install the light assembly map.

- 3. Install the cover assembly map light.
- 4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

2. MODELS WITH EyeSight

1. Install the spot map light bulb.

Caution:

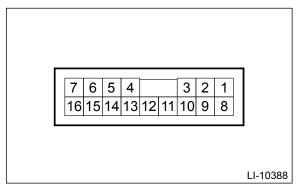
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

- 2. Install the cover assembly stereo camera. Ref. to EyeSight>Stereo Camera>INSTALLATION.
- **3.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Spot Map Light

INSPECTION

1. Measure the resistance between connector terminals.



Light switch

Terminal No.	Inspection conditions	Standard
1 — 13	Switch OFF	1 M Ω or more
	Switch ON	Approx. 18 Ω

• Door switch (latch & actuator assembly front)

Terminal No.	Inspection conditions	Specification
1 — 4	Switch DOOR	Approx. 18 Ω

2. Replace the harness and bulb if it is found defective.

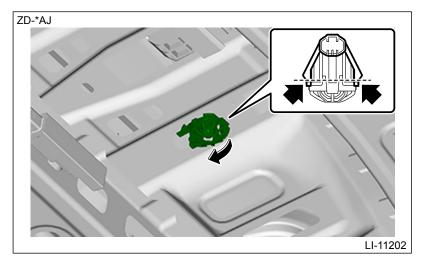
LIGHTING SYSTEM > Trunk Room Light

REMOVAL

Note:

Do not remove the trunk room light if removing the bulb only.

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the light assembly trunk room.
 - (1) Release the claws.
 - (2) Disconnect the connector and remove the light assembly trunk room.



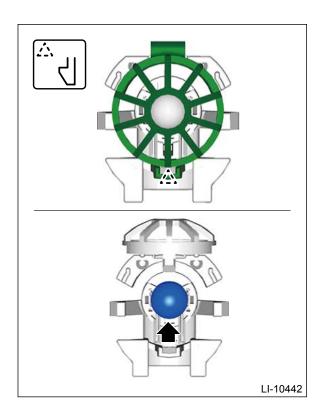
3. Release the claws to open the bulb cover, then remove the bulb.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.



LIGHTING SYSTEM > Trunk Room Light

INSTALLATION

1. Install the bulb and bulb cover.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

- **2.** Connect the connector, and install the light assembly trunk room.
- 3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Vanity Mirror Light

REMOVAL

Note:

- The vanity mirror light is integrated into the sun visor assembly. Replace the sun visor assembly if faulty. Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>REMOVAL.
- Do not remove the sun visor assembly if removing the bulb only.
- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the sun visor assembly. <a>Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>REMOVAL.
- 3. Remove the vanity mirror light bulb.

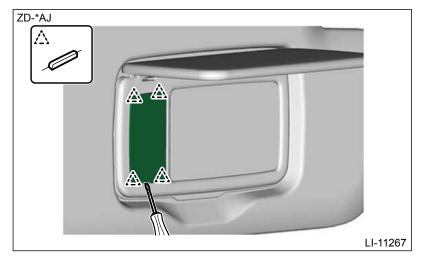
Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.

(1) Release the claws and remove the lens.



(2) Remove the vanity mirror light bulb.

LIGHTING SYSTEM > Vanity Mirror Light

INSTALLATION

1. Install the vanity mirror light bulb and lens.

Caution:

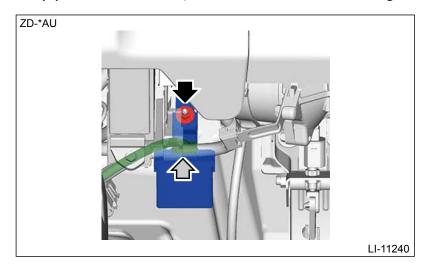
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

- 2. Install the sun visor assembly. Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>INSTALLATION.
- **3.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Auto Headlight Beam Leveler Control Module

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS NOTE > BATTERY.
- 2. Remove the auto headlight beam leveler CM.
 - (1) Disconnect the connector.
 - (2) Remove the nuts, and remove the auto headlight beam leveler CM.



LIGHTING SYSTEM > Auto Headlight Beam Leveler Control Module

INSTALLATION

1. Install the auto headlight beam leveler CM, and connect the connector.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

- **2.** Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.
- **3.** Perform the initialization of the auto headlight beam leveler system. Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>OPERATION.

LIGHTING SYSTEM > Reflex Reflector

NOTE

The reflex reflector is integrated into the light assembly rear combination.

For operation procedures of the reflex reflector, refer to "Rear Combination Light Assembly". Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.

LIGHTING SYSTEM > Door Step Light

REMOVAL

- 1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
- 2. Remove the light assembly door step.

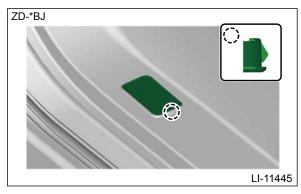
Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

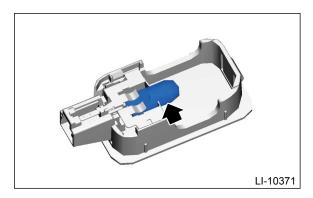
Note:

When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.

(1) Release the claws, and remove the light assembly door step.



- (2) Disconnect the connector, and remove the light assembly door step.
- 3. Remove the bulb.



LIGHTING SYSTEM > Door Step Light

INSTALLATION

1. Install the bulb.

Caution:

Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

- **2.** Connect the connector, and install the light assembly door step.
- 3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS > NOTE > BATTERY.

LIGHTING SYSTEM > Door Switch

NOTE

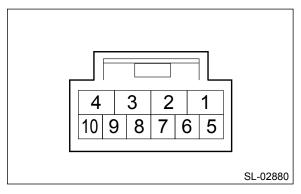
The door switch is integrated into the latch & actuator assembly front.

For operation procedures, refer to "Door Latch & Door Lock Actuator Assembly" in the "SECURITY AND LOCKS" section. Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly.

LIGHTING SYSTEM > Door Switch

INSPECTION

1. Measure the resistance between connector terminals.



• RH

Terminal No.	Inspection conditions	Standard
6 — 8	Door open	Less than 1 Ω
	Door closed	1 M Ω or more

• LH

Terminal No.	Inspection conditions	Standard
9 — 7	Door open	Less than 1 Ω
	Door closed	$1~ extsf{M}\Omega$ or more

2. Replace the latch & actuator assembly front if it is found defective.